CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 00-101 FOR

GEM RESOURCES, LLC, PLANT AND WELLFIELD OWNER
U.S. DEPARTMENT OF INTERIOR, BUREAU OF LAND MANAGEMENT, LAND OWNER
FPL ENERGY, AGENT FOR PLANT AND WELLFIELD OWNER
FPL ENERGY OPERATING SERVICES, PLANT AND WELLFIELD OPERATOR
EAST MESA GEOTHERMAL PROJECT—PLANT EAST MESA (PEM) UNITS 5 & 6, FACILITY NAME
GEOTHERMAL WELLFIELD, CONTAINMENT BASINS/MUD PITS, ABOVEGROUND MODULAR
CONTAINMENT STRUCTURE, AND HOLDING POND
Southeast of Holtville - Imperial County

Location of Discharge: Sections 7, 8, 12 and 17, T16S, R17E, SBB&M

A. MONITORING-GENERAL

- 1. The reporting responsibilities of the discharger are specified in the California Water Code. This self-monitoring program is issued in accordance with Provision No. 1 of Regional Board Order No. 00-101. The principal purpose of this Monitoring Program is:
 - a. To document compliance with the Waste Discharge Requirements adopted by the California Regional Water Quality Control Board.
 - b. To facilitate a self-policing by the discharger in the prevention and abatement of pollution arising from the discharge.
 - c. To conduct water quality analyses.
- 2. All sampling methods not specified below or in the Monitoring and Reporting Program shall be conducted in accordance with U.S. Environmental Protection Agency approved procedures. Analyses shall be conducted by a laboratory certified by the California Department of Health Services to perform the required analyses, unless a field analysis is specified.
- 3. The Regional Board's Executive Officer may reduce or change the monitoring parameters and/or the monitoring frequency during the course of this monitoring program.

B. MONITORING REPORTS AND OBSERVATION SCHEDULE

"Reporting Period" means the duration separating the submittal of a given type of monitoring report from the time the next iteration of that report is scheduled for submittal. The reporting period for the monitoring program is semi-annual. An annual report, which is a summary of all the monitoring during the previous year, shall also be submitted to the Regional Board. The submittal dates for each reporting period shall be as follows:

- 1. Semi-annual Monitoring Reports
 - a. First Semi Annual (January 1, through June 30) report due by July 31
 - b. Second Semi-Annual (July 1 through December 31) report due February 15

2. Annual Summary Report

January 1 through December 31 - report due on March 15 of the following year.

C. REPORTS TO BE FILED WITH THE BOARD

A written "Detection Monitoring Report" shall be submitted twice annually, in addition to an "Annual Summary Report". The report shall be submitted by the above-specified date. The following information/data should be included in each report:

1. Semi - Annual Monitoring Report Requirements:

a. General Information

The following shall be included:

- 1. Estimated total volume of fluid discharged, if any, in each containment basin/mud pit, above ground modular containment structure, and holding pond in gallons/month during the reporting period.
- 2. Estimated total volume of fluid contained, if any, in the containment basin/mud pit, above ground modular containment structure, and holding pond by the reporting time.
- 3. Estimated total volume of oil removed by the oil skimming system during the reporting period.
- 4. Estimated total volume of geothermal fluid extracted from the production wells in gallons/month.
- 5. Estimated total volume of geothermal fluid injected to the injection wells in gallons/month.
- 6. Estimated volume of solid waste discharged, if any, to the containment basin/mud pit and estimated volume by the reporting time.
- 7. The general conditions of the containment basin/mud pit and holding pond including any observation of erosion.
- 8. If any maintenance has been provided to the containment basin/mud pit and holding pond, a description of the subject maintenance shall be included.
- 9. For all occurrences of spills/leaks of reportable quantity during the reporting period, a summary of each incident detailing the essential points of the cause of the spill/leak shall be transmitted in the semi-annual report. The summary shall include estimated volumes of liquid/geothermal fluid or solid waste spilled/leaked, and a description of the management practices addressing each spill/leak of waste for each incident occurring in the reporting period. The reporting minimum quantity of geothermal brine and other geothermal waste is 150 gallons.
- 10. Description of any detected liquid leaving or entering a WMU, including estimated size of affected area, and flow volume.
- 11. A letter transmitting the essential points shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If

the discharger has previously submitted a detailed time schedule for correcting the violations, a reference to the correspondence transmitting the schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer, at the level of vice-president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. Containment Basins/Mud Pits and Holding Pond Monitoring:

The containment basins/mud pits and holding basins monitoring system consists of a number of solids and liquid wastes monitoring approach. The solid and liquid waste monitoring sampling assists in determining whether the ground water has been or might be impacted by the discharge operation. The monitoring frequency is quarterly and annually. The reporting frequency is semi-annual and annually. The following are the monitoring and reporting requirements:

- Pre-sampling for Samples Obtained From the Basins/Mud Pits, Above Ground Modular <u>Containment Structure, and Holding Pond</u>: For each monitoring point addressed by the report, a description of the calibration of the field equipment, method and time of water level measurement, the placement of the sampler in the basin and pond, method of rinsing the equipment, methods used to monitor field pH, temperature, conductivity, and the method of disposing of the rinse water.
- 2. <u>Sampling:</u> For each monitoring point addressed by the report, a description of the type of sampler or other device used and its placement for sampling, and detailed description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and times of sampling, the names and qualifications of the person actually taking the samples, and any other observations).
- 3. Water samples shall be collected once per quarter from the containment basins/mud pits and holding ponds, if any water is present during the reporting period, and shall be analyzed for the following constituents: suspended solid, total dissolved solids, pH, specific conductance, carbonate, phosphate, sulfate, iron, and oil and grease.
- 4. Water samples also shall be collected once per year from the containment basins/mud pits, above ground modular containment structure, and holding basin, if any, by November/December of each year following adoption of this Board Order, and analyzed for the following constituents: pH, arsenic, antimony, cadmium, lead, total chromium, copper, manganese, barium, zinc, and total petroleum hydrocarbons.
- 5. If the containment basins/mud pits and holding ponds are dry by the sampling times, and liquid or solid waste has been discharged during the year to the WMU, soil samples shall be collected and analyzed once per year for the following constituents: suspended solids, total dissolved solids, pH, specific conductance, carbonate, phosphate, sulfate, iron, and oil and grease, arsenic, antimony, lead, total chromium, cadmium, manganese, copper, barium, zinc, and total petroleum hydrocarbons.

c. Production and Injection Wells Monitoring:

The production and injection wells monitoring system consists of a number of solids and liquid waste monitoring approach. The solid and liquid waste monitoring sampling assists in

determining whether the ground water has been or might be impacted by the discharge operation. The monitoring frequency is annually. The reporting frequency is annually. The following are the monitoring and reporting requirements:

For the production wells listed below, (1) provide for each well tested (if any) a summary of any integrity test results conducted to comply with the requirements of the BLM and State of California, Department of Conservation, Division of Oil, Gas and Geothermal Resources (if any), (2) summary of medium and major repairs and (3) collect from the incoming production pipe line main header one composite sample per year and analyze for the following: TDS, suspended solids, conductivity, and pH.

For the injection wells listed below, (1) provide also for each well tested a summary of the integrity test results conducted to comply with the requirements of the BLM and State of California, Department of Conservation, Division of Oil, Gas and Geothermal Resources (if any), (2) summary of medium and major repairs, and (3) collect from the main re-injection pipe line header one (1) composite sample per year of geothermal fluid injected and analyzed for the following: TDS, suspended solids, conductivity, and pH.

<u>Wells</u>	<u>Type</u>	<u>T., R., SBB&M</u>	Location
8-1 13-7 16-7 27-8 28-7 32-17 42-18 44-7 44A-7 44B-7 53-12 53-17 56RD-7 61-7 63-7 78-12 81-7 83-7 84-7 85-12 21-7 24-8 25-7 26-7 27-7 33-7 41-7 49-7 54-12	Injection Inject	T., R., SBB&M T16S, R17E, SBB&M T16S, R16E, SBB&M T16S, R16E, SBB&M T16S, R16E, SBB&M T16S, R17E, SBB&M	Location 660 ft. S. & 660 ft. E. of NW Corner Sec. 8 1494 ft. S. & 310 ft. E. of NW Corner Sec. 7 1974 ft. N. & 104 ft. E. of SW Corner Sec. 7 625 ft. N. & 653 ft. E. of SW Corner Sec. 8 630 ft. N. & 005 ft. E. of SW Corner Sec. 8 630 ft. N. & 751 ft. E. of SW Corner Sec. 8 225 ft. N. & 2453 ft. E. of SW Corner Sec. 7 2500 ft. S. & 2500 ft. E. of NW Corner Sec. 7 2500 ft. S. & 2550 ft. E. of NW Corner Sec. 7 2500 ft. S. & 2345 ft. W. of NE Corner Sec. 7 1108 ft. S. & 2345 ft. W. of NE Corner Sec. 12 1684 ft. S. & 3084 ft. E. of NW Corner Sec. 17 1618 ft. N. & 2487 ft. E. of SW Corner Sec. 7 500 ft. S. & 1320 ft. W. of NE Corner Sec. 7 1500 ft. S. & 1320 ft. W. of NE Corner Sec. 7 630 ft. N. & 35 ft. W. of SE Corner Sec. 7 630 ft. N. & 35 ft. W. of SE Corner Sec. 7 2780 ft. N. & 500 ft. W. of SE Corner Sec. 7 2780 ft. N. & 500 ft. W. of SE Corner Sec. 7 1534 ft. S. & 310 ft. E. of SW Corner Sec. 7 900 ft. S. & 800 ft. E. of NW Corner Sec. 7 1534 ft. S. & 310 ft. E. of NW Corner Sec. 7 1534 ft. S. & 310 ft. E. of NW Corner Sec. 7 1535 ft. N. & 104 ft. E. of SW Corner Sec. 7 1536 ft. N. & 105 ft. E. of NW Corner Sec. 7 1537 ft. N. & 105 ft. E. of NW Corner Sec. 7 1539 ft. N. & 1100 ft. E. of SW Corner Sec. 7 1530 ft. N. & 1100 ft. E. of SW Corner Sec. 7 1531 ft. N. & 2452 ft. E. of SW Corner Sec. 7 1532 ft. S. & 2159 ft. W. of NE Corner Sec. 7 1431 ft. S. & 1154 ft. W. of NE Corner Sec. 7
54-12 61-12	Production Production	T16S, R16E, SBB&M T16S, R16E, SBB&M	1431 ft. S. & 1154 ft. W. of NE Corner Sec. 12 1077 ft. S. & 2345 ft. W. of NE Corner Sec. 12
61-18	Production	T16S, R17E, SBB&M	1310 ft. N. & 1280 ft. W. of SE Corner Sec. 7
65-7 71-7	Production Production	T16S, R17E, SBB&M	1340 ft. N. & 1281 ft. W. of SE Corner Sec. 7 754 ft. S. & 1128 ft. W. of NE Corner Sec. 7
71-7 72-13	Production	T16S, R17E, SBB&M T16S, R17E, SBB&M	630 ft. N. & 25 ft. E. of SW Corner Sec. 7
74-12	Production	T16S, R17E, SBB&M	1594 ft. S. & 310 ft. E. of NW Corner Sec. 7

81-12 Production T16S, R16E, SBB&M 1452 ft. S. & 1073 ft. W. of NE Corner Sec. 12 82RD-7 Production T16S, R17E, SBB&M 784 ft. S. & 1129 ft. W. of NE Corner Sec. 7 88-7 Production T16S, R17E, SBB&M 500 ft. N. & 500 ft. W. of SE Corner Sec. 7

d. Ground Water Wells Monitoring:

The ground water wells monitoring system consist of groundwater monitoring approach. The ground water monitoring sampling assists in determining whether the ground water has been or might be impacted by the discharge operation. The monitoring frequency is semi-annual and the reporting is annually. From the ground water monitoring wells MW-1, MW-2, and MW-3 located around the holding basin at the PEM Units 5 & 6 collect samples from each monitoring well by the semi-annual reporting period and analyze for the following constituents: TDS, suspended solids, specific conductance, pH, arsenic, lead, volatile organic compounds (VOCs), and oil and grease. Also, collect samples from each monitoring well one (1) time per year by November/December and analyze for the following constituents: carbonate, phosphate, sulfate, iron, antimony, total chromium, cadmium, manganese, copper, barium, and zinc.

2. Annual Summary Report

The discharger shall submit an annual report in March of the following year to the Regional Board covering the previous monitoring year. The reporting period ends December 31 of each year. This report shall contain:

- a. All monitoring analytical data obtained during the previous two (2) six-month Reporting Periods should be presented in tabular form.
- A comprehensive discussion of compliance record, and the result of any corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements;
- c. A written summary of water or solid waste analyses, indicating any changes, if any, made since the previous annual report.

3. Contingency Reporting

- a. The discharger shall report by telephone concerning any release of reportable quantity of waste material from the designated area within 48 hours after it is discovered. A written report shall be filled with the Regional Board within seven (7) days, containing at least the following information:
 - 1. A map showing the location(s) of the discharge; and
 - 2. A description of the nature of the discharge (e.g., all pertinent observation and analyses); and
 - 3. Corrective measures underway or proposed.
- b. Should a release be tentatively identified, the discharger shall verbally notify within 48 hours the Regional Board as to the monitoring point(s) and constituents or parameter(s) involved, shall provide written notification within seven (7) days of such determination, and shall carry out a discrete retest. If the retest confirms the existence of a release, the discharger shall carry out the requirements of **C**.d. below. In any case, the discharger shall inform the Regional Board of the outcome of the retest as soon as the results are available, following up with written results submitted by certified mail within seven (7) days of completing the retest.

- c. If either the discharger or the Regional Board determines that there is significant physical evidence of a release, the discharger shall immediately notify the Regional Board of this fact (or acknowledge the Regional Board's determination) and shall carry out the requirements of **C**.d. below for all potentially-affected monitored media.
- d. If the discharger concludes that a release has been discovered:
 - If this conclusion is not based upon "direct monitoring" of the of the Constituent of Concern, then the discharger shall, within thirty days, sample for all Constituents of Concern at all Monitoring Points and submit them for laboratory analysis. Within seven (7) days of receiving the laboratory analytical results, the discharger shall notify the Regional Board, of the concentration of all Constituents of Concern at each Monitoring Point.
 - 2. The discharger shall, within 90 days of discovering the release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program.
 - 3. The discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study for remediation.
- e. Any time the discharger concludes or the Regional Board Executive Officer concludes that a liquid or gaseous phase release from PEM Units 5 & 6 has proceeded beyond the facility boundary, the discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (affected persons).
 - 1. Initial notification to affected persons shall be accomplished within seven (7) days of making this conclusion and shall include a description of the discharger's current knowledge of the natural extend of the release; and
 - 2. Subsequent to initial notification, the discharger shall provide updates to all Affected Persons including any newly Affected Persons within seven (7) days of concluding there has been any material change in the natural or extent of the release.

D. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory, and shall be retained for a minimum of five (5) years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:

- 1. Identity of sample and of the monitoring point from which it was taken, along with the identity of the individual who obtained the sample:
- 2. The date, exact places, and time of sampling or measurement(s);
- 3. The individual(s) who performed the sampling or measurement(s);
- 4. The date(s) and time analyses were started and completed;
- 5. The individual(s) responsible for reviewing the analyses;
- 6. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagent used;
- 7. The analytical techniques or method used; and Calculation of the results; and
- 8. Result of analyses, and the Maximum Detection Limit (MDL) for each analysis.

SUMMARY OF MONITORING AND REPORTING REQUIREMENTS

C.(1.)(a). General Information

Sampling Reporting

<u>Pa</u>	<u>rameters</u>	<u>Unit</u>	<u>Frequency</u>	<u>Frequency</u>
1.	Estimated volume of fluid discharged to the containment basins/mud pits, above ground modular containment structure and holding pond.	Gallons/m	nonth	Semi-annual
2.	Estimated volume of fluid contained in containment basin, above ground containment structure and pond.	Gallons		Semi-annual
3.	Estimated volume of oil removed by the oil skimming system from the above ground modular containment structure.	Gallons		Semi-annual
4.	Estimated total volume of geothermal fluid extracted from production wells.	Gallons/m	onth	Semi-annual
5.	Estimated total volume of geothermal fluid injected to the injection wells.	Gallons/m	onth	Semi-annual
6.	Estimated volume of solid waste removed from the basin and pond by the reporting time.			Semi-annual
7.	Condition of the containment basins and pond.			Semi-annual
8.	Description of maintenance provided to the basins and pond.			Semi-annual
9.	A summary report of spills/leaks of reportable, if any.			Semi-annual
10.	Description of any detected liquid leaving or entering the WMU, including affected area, and flow volume.			Semi-annual
11.	Letter of transmittal			Semi-annual

C.(1.)(b). Containment Basin and Pond Monitoring

<u>Parameters</u>	<u>Unit</u>	Sampling <u>Frequency</u>	Reporting <u>Frequency</u>
 Description of pre-sampling for samples obtained from the basin and pond. 		Quarterly	Semi-annual
2. Description of sampling procedure		Quarterly	Semi-annual

3. Liquid samples from containment basins/mud pits and holding pond shall be analyzed for the following:

a.	Suspended solids	mg/L	Quarterly	Semi-annual
b.	Total dissolved solids	mg/L	Quarterly	Semi-annual
C.	рН	#	Quarterly	Semi-annual
d.	Specific conductance	μmohs/cm	Quarterly	Semi-annual
e.	Carbonate	mg/L	Quarterly	Semi-annual
f.	Phosphate	mg/L	Quarterly	Semi-annual
g.	Sulfate	mg/L	Quarterly	Semi-annual
h.	Iron	mg/L	Quarterly	Semi-annual
i.	Oil and grease	mg/L	Quarterly	Semi-annual

4. Liquid samples also from containment basins/ mud pits and holding pond, and above ground modular containment structure shall be analyzed for the following:

a.	рН	#	Annually	Annually
b.	Arsenic	mg/L	Annually	Annually
C.	Antimony	mg/L	Annually	Annually
d.	Cadmium	mg/L	Annually	Annually
e.	Lead	mg/L	Annually	Annually
f.	Total chromium	mg/L	Annually	Annually
g.	Copper	mg/L	Annually	Annually
h.	Manganese	mg/L	Annually	Annually
i.	Barium	mg/L	Annually	Annually
j.	Zinc	mg/L	Annually	Annually
k.	Total petroleum hydrocarbon	mg/L	Annually	Annually

5. Solid waste samples (if containment basins/ mud pits, above ground modular containment structure, and holding pond are dry by the sampling time and liquid or solid has been discharged) shall be analyzed for the following:

a.	Suspended solids	mg/L	Annually	Annually
b.	Total dissolved solids	mg/L	Annually	Annually
c.	pH	#	Annually	Annually
d.	Specific conductance	μmohs/cm	Annually	Annually
e.	Carbonate	mg/L	Annually	Annually
f.	Phosphate	mg/L	Annually	Annually
g.	Sulfate	mg/L	Annually	Annually
ĥ.	Iron	mg/L	Annually	Annually
i.	Oil and grease	mg/L	Annually	Annually
j.	Arsenic	mg/L	Annually	Annually
k.	Antimony	mg/L	Annually	Annually
I.	Lead	mg/L	Annually	Annually
m.	Total chromium	mg/L	Annually	Annually
n.	Cadmium	mg/L	Annually	Annually

	o. Manganesep. Copperq. Bariumr. Zincs. Total petroleum hydrocarbon	mg/L mg/L mg/L mg/L mg/L	Annually Annually Annually Annually Annually	Annually Annually Annually Annually Annually
C.(1.)(c). Production and Injection Wells Monitoring			
Fo	r the Production Well:			
1.	Provide summary of integrity test result (if any).		Annually	Annually
2.	A summary of medium and major repair.		Annually	Annually
3.	Collect one composite samples and analyze for the	following:		
	a. Total dissolved solidsb. Suspended solidsc. Specific conductanced. pH	mg/L mg/L μmohs/cm #	Annually	Annually Annually Annually Annually
For the	e Injection Well:			
1.	Provide summary of integrity test result		Annually	Annually
2.	A summary of medium and major repair		Annually	Annually
3.	Collect one composite samples of injecting geother	mal fluid and	I analyze for the	following:
	a. Total dissolved solidsb. Suspended solids	mg/L mg/L	Annually Annually	Annually Annually

C.(1.)(d). **Ground Water Wells Monitoring**

c. Specific conductance

d. pH

1. Collect samples from ground water monitoring wells MW-1, MW-2, and MW-3 and analyze for the following:

#

μmohs/cm Annually

Annually

Annually

Annually

a.	Total dissolved solids	mg/L	Semi-annual	Annually
b.	Suspended solids	mg/L	Semi-annual	Annually
C.	Specific conductance	μmohs/cm	Semi-annual	Annually
d.	рН	#	Semi-annual	Annually
e.	Arsenic	mg/L	Semi-annual	Annually
f.	Lead	mg/L	Semi-annual	Annually
g.	VOCs	mg/L	Semi-annual	Annually
h.	Oil and grease	mg/L	Semi-annual	Annually
i.	Carbonate	mg/L	Annually	Annually
j.	Phosphate	mg/L	Annually	Annually
k.	Sulfate	mg/L	Annually	Annually
I.	Iron	mg/L	Annually	Annually
m.	Antimony	mg/L	Annually	Annually
n.	Total chromium	mg/L	Annually	Annually
0.	Cadmium	mg/L	Annually	Annually
p.	Manganese	mg/L	Annually	Annually

	q. Copperr. Bariums. Zinc	mg/L mg/L mg/L	Annually Annually Annually	Annually Annually Annually
C.(2.)	Annual Summary Report			Annually
C.(3).	Contingency Reporting			Within 48 hrs.

REPORTING

- 1. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.
- 2. Record of monitoring information shall include:
 - a. The date, exact places, and time of sampling or measurement(s);
 - b. The individual(s) who performed the sampling or measurement(s);
 - c. The date(s) analyses were performed;
 - d. The individual(s) responsible for reviewing the analyses;
 - e. The analytical techniques or method used; and
 - f. The result of such analyses.
- 3. Each report shall contain the following statement:

"I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- 4. A duly authorized representative of the discharger may sign the documents if:
 - a. The authorization is made in writing by the person described above;
 - b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
 - c. The written authorization is submitted to the Regional Board's Executive Officer.
- 5. Monitoring reports shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this monitoring report.
- 6. Semi-annual monitoring reports shall be submitted to the Regional Board in accordance with the following schedule:

First Semi-annual (January 1 through June 30) - due July 31 Second Semi-annual (July 1 through December 31) - due February 15

- 7. Annual summary report shall be submitted to the Regional Board by March 15 of each year.
- 8. Submit Monitoring Reports to:

California Regional Water Quality Control Board Colorado River Basin Region 73-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260

Ordered by: original signed by/
Executive Officer

September 13, 2000
Date